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12 April 2001 (12.04.2001)

PCT

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WO 01/25390 A3(51) International Patent Classification⁷: **B29C 44/34**,
C11D 3/37

(21) International Application Number: PCT/US00/27340

(22) International Filing Date: 4 October 2000 (04.10.2000)

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(26) Publication Language: English

(30) Priority Data:
9923344.7 5 October 1999 (05.10.1999) GB(71) Applicant (for all designated States except US): **THE PROCTER & GAMBLE COMPANY** [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CORRAND, Didier, Marcel** [FR/FR]; Saint Julian, F-38460 Siccieu (FR). **YORK, David, William** [GB/GB]; 10 Ladywell Way, Ponteland, Newcastle upon Tyne NE20 9TB (GB). **SOMMERVILLE-ROBERTS, Nigel** [GB/GB]; 42 Cavendish Place, Jesmond, Newcastle upon Tyne NE2 2NH (GB).(74) Agents: **REED, T., David** et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).(81) Designated States (*national*): AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**Published:**

- with international search report
- with amended claims

(88) Date of publication of the international search report:
27 September 2001

Date of publication of the amended claims: 6 December 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WATER UNSTABLE FOAM COMPOSITIONS

(57) Abstract: The present invention relates to foam components comprising polymeric material and an active ingredient, such as detergent ingredients, which are to be delivered to aqueous environment. Highly preferred active ingredients include enzymes. The foam component is stable upon contact with air but dissolves, disintegrates or disperses in water. The invention also relates to compositions containing the foam components and methods for making the foam components.

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PATENT COOPERATION TREATY

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REC'D 17 JAN 2002

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference CM2203M/JB		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) FOR FURTHER ACTION	
International application No. PCT/US00/27340	International filing date (day/month/year) 04/10/2000	Priority date (day/month/year) 05/10/1999	
International Patent Classification (IPC) or national classification and IPC C11D11/00			
Applicant THE PROCTER & GAMBLE COMPANY			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 6 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 12/03/2001	Date of completion of this report 15.01.2002
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Miller, B Telephone No. +49 89 2399 8540 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/27340

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-27 as originally filed

Claims, pages:

28,30,31 as originally filed

29 as received on 12/03/2001 with letter of 09/03/2001

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/27340

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 5-11.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 5 (partly), 6-11.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims 3,13,18

No: Claims 1,2,4,12,14-17, 19-22

Inventive step (IS)

Yes: Claims

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/27340

	No:	Claims	1-4,12-22
Industrial applicability (IA)	Yes:	Claims	1-4,12-22
	No:	Claims	

2. Citations and explanations
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US00/27340

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claims, or part of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The EPO policy when acting as an International Preliminary Examination Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

Consequently, the subject-matter of claims 5 (only partly searched) and 6-11 (not searched, see international search report) is not examined by the International Preliminary Examination Authority.

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Novelty (Article 33(2) PCT)

The present application does not meet the criterion set forth in Article 33(2) PCT because the subject-matter of claims 1, 2, 4, 12, 14-17 and 19-22 is not new in respect of the prior art as defined in the regulations (Rule 64(1)-(3) PCT).

The following documents disclose already foam components coming within the scope of present claims 1, 2, 4, 12, 14-17 and 19-22:

- a) JP 48 001500 (D1, abstract) depicts a composition comprising a mixture of polystyrene resin and polyvinyl alcohol resin which are kneaded together with a plasticizer, a stabilizer and a foaming agent. The foamed article can be shaped into filaments, pellets or sheets which are dispersible in water. An active ingredient (e.g. insecticides, fungicides, herbicides, deodorants, etc.) is adsorbed thereon.

- b) US-A-5 458 884 (D2, claim 1, example 1) describes a bio-erodible device for administering of active ingredients comprising a water soluble, muco-adherent, lyophilised foam and an active ingredient. The device is obtained by a foaming cellulose polymer in presence of an active ingredient (example 1).

2. Inventive Step (Article 33(3) PCT)

The problem to be solved by the present invention may be regarded as to provide an alternative method of protecting and delivering sensible active ingredients in aqueous conditions (page 2, lines 1-2).

Document D1, which is considered to represent the most relevant state of the art, uses the same solution for the underlying problem, in particular active ingredients are protected from ingredients which may react with said active ingredients by incorporating said active ingredients into a foamed particle.

Therefore the principle of the present "invention" is already known from D1 (and also from D2). Moreover, the application is devoid of any examples or indications that specific combinations of features, particularly those mentioned in the claims, provide any unexpected advantage or surprising effect.

Therefore claims 2-4, 12-22 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step. The described features come within the scope of the customary practice followed by the man skilled in the art, especially as the advantages thus achieved can be readily contemplated in advance.

submitting the mixture of a) to pressure, preferably conducted under increasing of the temperature, and subsequently reducing the pressure, thereby causing the liquid or part thereof to evaporate; and/or step b) preferably conducted by heating the mixture thereby causing the liquid or part thereof to evaporate.

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6. A foam component according to any preceding claim whereby the polymeric material comprises a water-soluble polymer and/ or water-dispersible polymer.
7. A foam component according to any preceding claim which has a relative density of 0.05 to 0.9.
8. A foam component according to any preceding claim whereby the active ingredient is a cleaning product ingredient, fabric care ingredient, pharmaceutical ingredient, cosmetic ingredient, personal care ingredient.
9. A foam component according to claim 7 whereby the active ingredient is selected from moisture sensitive ingredients and/ or liquid ingredients, preferably selected from enzymes, perfumes, surfactants, brighteners, bleaches, bleach activators, fabric softeners, fabric conditioners, antibacterial agents, effervescing systems and mixtures thereof.
10. A foam component according to any preceding claim whereby the active ingredient comprises an acidic compound, and/ or the polymeric material comprises an acidic polymer and/ or an additional acidic agent is present in the foam component.
11. A foam component according to any preceding claim whereby the polymeric material comprises a water-soluble polymer selected from polyvinylalcohol, polysaccharides, polycarboxylic acids, cellulose, modified cellulose, gums, and derivatives of said polymers, and mixtures of said polymers.

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 05 June 2001 (05.06.01)	
International application No. PCT/US00/27340	Applicant's or agent's file reference CM2203M/JB
International filing date (day/month/year) 04 October 2000 (04.10.00)	Priority date (day/month/year) 05 October 1999 (05.10.99)
Applicant CORRAND, Didier, Marcel et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 12 March 2001 (12.03.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Zakaria EL KHODARY
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 April 2001 (12.04.2001)

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(10) International Publication Number
WO 01/25390 A3

- (51) International Patent Classification⁷: **B29C 44/34, C11D 3/37**
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- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
9923344.7 **5 October 1999 (05.10.1999)** **GB**
- (71) Applicant (for all designated States except US): **THE PROCTER & GAMBLE COMPANY [US/US];** One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **CORRAND, Didier, Marcel [FR/FR];** Saint Julian, F-38460 Siccieu (FR). **YORK, David, William [GB/GB];** 10 Ladywell Way, Ponteland, Newcastle upon Tyne NE20 9TB (GB). **SOMMERVILLE-ROBERTS, Nigel [GB/GB];** 42 Cavendish Place, Jesmond, Newcastle upon Tyne NE2 2NH (GB).
- (74) Agents: **REED, T., David et al.;** The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
- (88) Date of publication of the international search report:
27 September 2001
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **WATER UNSTABLE FOAM COMPOSITIONS**

(57) Abstract: The present invention relates to foam components comprising polymeric material and an active ingredient, such as detergent ingredients, which are to be delivered to aqueous environment. Highly preferred active ingredients include enzymes. The foam component is stable upon contact with air but dissolves, disintegrates or disperses in water. The invention also relates to compositions containing the foam components and methods for making the foam components.

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INTERNATIONAL SEARCH REPORT

International Application No

JS 00/27340

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B29C44/34 C11D3/37

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B29C B29B B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Section Ch, Derwent Publications Ltd., London, GB; Class A13, AN 1973-05056U XP002162642 & JP 48 001500 B (NIPPON SYNTHETIC CHEM IND CO) abstract ---	1,2,4, 13-17,22
X	US 5 458 884 A (BRITTON PETER ET AL) 17 October 1995 (1995-10-17) example 1 claims ---	1,2,4,5
X	US 3 887 614 A (ANDO SUSUMU ET AL) 3 June 1975 (1975-06-03) column 2, line 8-13 claim 1 -----	1,2
A		3

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

12 March 2001

Date of mailing of the international search report

10. 04. 2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

OUDOT, R

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/27340

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 6-11
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US 00/27340

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 6-11

As claims 6-11 are not available in the search file, the search has been conducted on the remaining claims, with some obvious modifications.

Claims 1-4 stay unchanged.

Claim 5 has been searched until the word "matrix" in part (b). The last words of the sentence having no sense.

Claims 6-11 have not been searched.

Claims 12-22 are not renumbered, but any reference to the missing claims has been ignored.

For example, claim 19 becomes:

"A process for making foam component according to any of claims 1 to 3, or 12 to 14 ...".

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

, US 00/27340

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 48001500	B	NONE	
US 5458884	A	17-10-1995	
		CA 2105887 A	11-03-1994
		EP 0643963 A	22-03-1995
		NO 933239 A	04-05-1994
		NZ 299162 A	27-05-1998
		US 5650192 A	22-07-1997
		US 5891458 A	06-04-1999
		ZA 9306711 A	10-03-1995
US 3887614	A	03-06-1975	
		JP 48035329 B	27-10-1973
		DE 2059605 A	16-06-1971

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CM2203M/JB		FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 27340	International filing date (day/month/year) 04/10/2000	(Earliest) Priority Date (day/month/year) 05/10/1999	
Applicant THE PROCTER & GAMBLE COMPANY			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

WATER UNSTABLE FOAM COMPOSITIONS.

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/27340

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B29C44/34 C 37

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B29C B29B B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Section Ch, Derwent Publications Ltd., London, GB; Class A13, AN 1973-05056U XP002162642 & JP 48 001500 B (NIPPON SYNTHETIC CHEM IND CO) abstract	1,2,4, 13-17,22
X	--- US 5 458 884 A (BRITTON PETER ET AL) 17 October 1995 (1995-10-17) example 1 claims	1,2,4,5
X	--- US 3 887 614 A (ANDO SUSUMU ET AL) 3 June 1975 (1975-06-03) column 2, line 8-13 claim 1	1,2
A	-----	3

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

12 March 2001

Date of mailing of the international search report

10. 04. 2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

OUDOT, R

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/27340

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/27340

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 6-11
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 6-11

As claims 6-11 are not available in the search file, the search has been conducted on the remaining claims, with some obvious modifications.

Claims 1-4 stay unchanged.

Claim 5 has been searched until the word "matrix" in part (b). The last words of the sentence having no sense.

Claims 6-11 have not been searched.

Claims 12-22 are not renumbered, but any reference to the missing claims has been ignored.

For example, claim 19 becomes:

"A process for making foam component according to any of claims 1 to 3, or 12 to 14 ...".

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.